

**WRITTEN TESTIMONY OF**

**CAROLINE RYAN, M.D., MPH**

**SENIOR TECHNICAL ADVISOR FOR PREVENTION AND TECHNICAL TEAM LEADER  
For the OFFICE OF THE U.S. GLOBAL AIDS COORDINATOR**

**BEFORE THE**

**COMMITTEE ON INTERNATIONAL RELATIONS  
SUBCOMMITTEE ON AFRICA, GLOBAL HUMAN RIGHTS  
AND INTERNATIONAL OPERATIONS  
U.S. HOUSE OF REPRESENTATIVES**

**June 27, 2006**

Mr. Chairman and Members of the Subcommittee:

Thank you for this opportunity to discuss President Bush's Emergency Plan for AIDS Relief (PEPFAR/Emergency Plan) and the successes and challenges of providing safe blood in the developing world, primarily Sub-Saharan Africa.

We have greatly appreciated the partnership between PEPFAR and the International Relations Committee, especially the Subcommittee on Africa. We would like to thank all the members of the Subcommittee, and your commitment to the U.S. leadership in the fight against this tragic pandemic.

The President and the Congress made a strategic decision to direct the activities of the Emergency Plan for global HIV/AIDS, and particularly on interventions designed for its prevention, care, and treatment. Of course, HIV/AIDS in the developing world is closely related to numerous other issues: economic development, food security, conflict, gender issues, and many more.

A focus of the Emergency Plan is to build local capacity to provide long-term, sustainable HIV/AIDS prevention, care and treatment programs in the countries with which we partner. Ensuring the availability of safe blood is one component of a multi-prong strategy to prevent HIV transmission. And the results of this strategy are already visible: South Africa and Botswana now have safe or nearly safe blood supplies available at the national levels. In Kenya, there are 150,000 more units of safe blood, up from 40,000 in 2004.

For the developing countries in which the Emergency Plan works, there are significant challenges to developing and maintaining an adequate sustainable supply of safe blood. These include:

- A lack of basic infrastructure which includes such things as consistent electricity, refrigeration, physical structures, laboratory equipment;
- Inadequate administrative procedures in place to allow for the purchase and management of blood-related commodities;
- A lack of or inadequate policy around blood safety and the clinical use of blood;
- And, A lack of strong health care systems.

These issues are pervasive in Sub-Saharan Africa, and remain part of a larger and more complex development challenge. The Emergency Plan, with its clear mandate to the prevention, treatment, and care for those infected with and affected by HIV/AIDS, cannot alone address the infrastructure, policy and capacity challenges faced by developing countries.

At the request of Representative Fattah and the House Appropriations Sub-Committee for Foreign Operations, the Office of the Global AIDS Coordinator has prepared a report on blood safety as a component of the HIV/AIDS prevention strategy. Together with our colleagues from the Center for Disease Control (HHS/CDC), the U.S. Agency for International Development (USAID), and the World Health Organization (WHO), we invited a group of technical consultants with expertise in blood safety to discuss the magnitude of the problem posed by unsafe blood supplies, the level of resources required to address the problem, the feasibility of a non-incremental approach, and the cost effectiveness of implementing a safe blood program in reducing rates of infection. The group's consensus was presented in the report findings provided to this committee.

Let me first discuss the HIV transmission risk from unsafe blood in the Emergency Plan focus countries. Actual data collected from PEPFAR focus country blood safety programs show an average of 3.19% of donors were HIV positive. Several studies have documented that blood transfusions are not the major cause of HIV transmission in most countries. Among young women, for instance, the risk associated with transfusions appears low compared to the proportions infected by heterosexual transmission. This data reflects the prevalence of HIV/AIDS only.

Even though transmission risk of HIV/AIDS through blood transfusions may be low, we have documented challenges in each of the following components of providing safe blood at the national level:

- Assuring that a sufficient amount of blood is collected in the country;
- Assuring the implementation of a system to recruit low risk donors;
- Assuring that quality screening of donated blood is occurring;
- And assuring that national policies and oversight to reduce unnecessary transfusions are in place.

These issues contribute to the higher risk of transfusion-transmitted diseases, including viral hepatitis and malaria, in addition to HIV/AIDS, in Africa.

To reduce the HIV/AIDS transmission risks presented by blood transfusions, the Emergency Plan supports

- National programs to improve the quality of blood supplies through improved policies;
- The establishment of laboratory facilities and commodity procurement;
- Healthcare worker training and management.

The Emergency Plan also provides technical assistance to aid countries in implementing the foundational components of effective national blood transfusion services.

PEPFAR promotes international blood safety organizations to partner with each of the focus countries to help in the development of a comprehensive system that includes low-risk blood donor selection, blood banking, and blood safety training. The goal of these programs is to increase blood supply through donor recruitment. The programs also work to ensure blood safety through proper screening of

donors and donated blood. They support the development or improvement of a national blood service in each country.

In fiscal year 2005, the Emergency Plan supported approximately 600 blood safety service outlets or programs in the focus countries. In 2004, PEPFAR partners obligated a total of \$24.4 million in funds to blood safety activities in the focus countries. In 2005, that amount increased to \$50 million. For fiscal year 2006, the current planned amount for blood safety activities is \$32.3 million.

During the first 20 months of funding, countries spent only one-third of the Emergency Plan funds allocated to Ministries of Health and National Blood Transfusion Services (MOH/NBTS) to establish safe blood systems. Two-thirds of funding remains in the pipeline. At the end of fiscal year 2005, approximately \$50 million was still in the pipeline and available, in addition to the \$32 million in funding planned for FY 2006. This is largely due to the infrastructure, human capacity, policy, and economic constraints experienced by the focus countries. These countries cannot effectively spend funding until another layer of infrastructure is in place to allow for sustainable expansion of services. Additionally, most blood safety-related activities supported by the Emergency Plan are implemented through partnerships with focus country government organizations such as the MOH. These structures are traditionally slower to act in applying interventions at the national level and often create an excess in available unused funding. Assuming that those funds currently in the pipeline are appropriately outlayed, the planned funding for blood safety activities will increase proportionately in FY 07.

Now I would like to briefly discuss a baseline for assuming the cost effectiveness of safe blood as a means to avert HIV-transmission. Utilizing the simple WHO resource model of a cost of \$45 to produce a unit of safe blood, the cost per HIV-infection averted can be extrapolated. Using a HIV prevalence rate of 3%, Testing 33 units of blood at \$45 a unit equals \$1500 per unit identified. As the potential for contracting HIV from tainted blood is 80%, the approximate cost per infection averted is \$2000 per infection (assuming all units of blood are used). I would point out that the WHO resource model assumes that basic infrastructure components such as functioning roadways, consistent supply of electricity, and sufficiently trained and available healthcare workers are in place and accessible. As I have mentioned, we know this is not the case, and that these development issues still pose a significant challenge in the countries the Emergency Plan supports. In reality, the cost per infection averted would be much more than \$2000 when including the infrastructure costs necessary.

The current levels of funding for blood safety activities strike a reasonable balance between the absorptive capacity of host countries to develop national blood services, and the continuation of a comprehensive and effective prevention program. The Emergency Plan must continue to be strategic in choosing where each prevention dollar is spent in support of this full portfolio of interventions. Blood safety activities continue to be supported as a necessary element of this portfolio. At current levels, we feel this both meets the capacity needs of the focus countries, and fits a comprehensive and cost effective prevention strategy.

Mr. Chairman, the Emergency Plan is experiencing success in supporting the HIV/AIDS strategies of our host nations. Providing safe blood in Africa is a broad issue, addressing the risk from all transfusion-transmissible diseases, including HIV/AIDS, hepatitis, and malaria. We at the Office of the Global AIDS Coordinator will continue to work with our colleagues at the Department of Health and Human Services to support the ongoing blood safety programs as part of the Emergency Plan efforts focusing on HIV/AIDS.

As countries continue to develop basic infrastructure and strengthening systems that they can maintain over the long-term, safe blood services will begin to expand for national coverage. The large-scale programs implemented as part of the Emergency Plan have begun to address this need with a thorough and comprehensive approach that will produce immediate results, long-term improvement, and the likelihood of sustainability. This Subcommittee can be proud that through the President's Emergency Plan, the American people are partners with families, communities, and nations that are reclaiming their future.

Thank you for the opportunity to speak with you today, and I would be happy to now address your questions.